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ShipClass ship.t

Images

Shown above are Deuterian regular, forward, left rotate, right rotate and damaged images.

Shown above are Quintitian regular, forward, left rotate, right rotate and damaged images.

Shown above is the explosion image.

Procedures

SetX (ipX : int)

- Sets the X-coordinate of the ship based on the inputted integer

SetY (ipY : int)

- Sets the Y-coordinate of the ship based on the inputted integer

SetSpeed (rpSpeed : real)

- Sets the speed multiplier based on the inputted real

SetPlanet (spPlanet : string)

- Sets the planet based on the inputted string

- ❖ The planet variable will be used to decide the appearance of the display images

SetAngle (ipAngle : int)

- ❖ Sets the angle integer based on the inputted integer divided by 36

Accelerate

- ❖ Calculates a horizontal distance to move from the negative sine of the ship's angle in degrees and the speed
- ❖ Calculates a vertical distance to move from the cosine of the ship's angle in degrees and the speed
- ❖ Changes the display image to *forward*

Drift

- ❖ Sets the display image of the object to the *regular* one
- ❖ Drops the time left for disabling by one if the ship is disabled

LeftRotate

- ❖ Adds one to the angle variable, or rotates it 10 degrees counter-clockwise
- ❖ Displays the *left rotate* image

RightRotate

- ❖ Subtracts one from the angle variable, or rotates it 10 degrees clockwise
- ❖ Displays the *right rotate* image

Disable (iTime : int)

- ❖ Sets the amount of time the ship is disabled based on the inputted integer

Enable

- ❖ Sets the disable time to zero, thus enabling control of the ship

Move

- ❖ Adds the horizontal distance multiplied by the speed to the X-coordinate
- ❖ Adds the vertical distance multiplied by the speed to the Y-coordinate

- Makes sure that the vertical and horizontal distances do not exceed the speed limit
- Allows for vertical wraparound mode by moving the ship from the top edge to the bottom edge and vice versa
- Allows for horizontal wraparound mode by moving the ship from the left edge to the right edge and vice versa

Banish

- Places the ship offscreen
- Stops the movement of the ship

Explode

- Displays an *explosion* image
- Plays an explosion sound effect

RemoveInertia

- Sets the vertical distance and the horizontal distances to zero

SetArmourTotal (ipArmour : int)

- Sets the total armour of the ship based on the inputted integer

SetArmour (ipArmour : int)

- Sets the armour of the ship based on the inputted integer

DropArmour (ipDrop : int)

- Subtracts the inputted integer from the ship's armour
- Displays the *damaged* image of the ship

AddArmour (ipAdd : int)

- Adds the inputted integer to the ship's armour

SetCapacitorTotal (apArray : int, rpCapacity : real)

- Selects a capacitor from an array based on the inputted integer subscript
- Sets the total capacity of the selected capacitor based on the inputted real

SetCapacitor (apArray : int, rpCapacity : real)

- Selects a capacitor from an array based on the inputted integer subscript
- Sets the amount of the selected capacitor based on the inputted real
- If the inputted real is greater than the capacity, it is reduced to the capacity

ChargeCapacitor (apArray : int, rpCapacity : real)

- Selects a capacitor from an array based on the inputted integer subscript
- Adds the inputted real to the selected capacitor
- If the capacitor amount is greater than the capacity, the amout is reduced to the capacity

DrainCapacitor (apArray : int)

- Selects a capacitor from an array based on the inputted integer subscript
- Reduces the capacitor amount to zero

Functions

GetX : int

- Outputs the X-coordinate of the ship as an integer

GetY : int

- Outputs the Y-coordinate of the ship as an integer

GetAngle : int

- Outputs the angle of the ship as an integer

GetAbility : boolean

- Outputs false as a default
- Outputs true if the disable count is greater than zero

IsTouching (ipX, ipY : int) : boolean

- Checks if the inputted integer location is within the hitbox of the ship
- Outputs false as a default

- Outputs true if the inputted location is within the hitbox

GetArmour : int

- Outputs the ship's armour as an integer

GetArmourPercentage : int

- Outputs the ship's armour divided by the ship's total armour, multiplied by 100 as an integer

GetArmourPercentage (apArray : int) : int

- Selects a capacitor from an array based on the inputted integer subscript
- Outputs the selected capacitor's amount divided by the selected capacitor's total multiplied by 100 as an integer

Defaults

ConstructShip (var opS : ShipClass)

- Sets default position of the ship
- Sets default speed of the ship
- Sets default planet of the ship
- Sets default armour total of the ship and sets the armour to the total
- Sets the default angle of the ship
- Sets all of the capacitors' capacities and their amounts to zero

DestructShip (var opS : ShipClass)

- Banishes the ship
- Frees all variables